



**Global Command and Control System (GCCS)
Version 2.2
HP Operating System and
Unified Build 3.0.1.6G Application
Implementation Procedures**

Prepared for DISA by

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List of Effective Pages

PAGE NUMBER	SOFTWARE VERSION NUMBER (DATE)
List of Effective Pages	GCCS2.2 (22 January 1997)
Table of Contents	GCCS2.2 (22 January 1997)
Chapter 1	GCCS2.2 (22 January 1997)
Chapter 2	GCCS2.2 (22 January 1997)
Chapter 3	GCCS2.2 (22 January 1997)
Chapter 4	GCCS2.2 (22 January 1997)
Chapter 5	GCCS2.2 (22 January 1997)
Chapter 6	GCCS2.2 (22 January 1997)

Table of Contents

1. Introduction	1
2 Pre-Installation Procedures.....	3
2.1 Installation Impact Information	3
2.2 Security_Server File Configuration.....	3
2.3 Additional File Configuration (active_spt and processor_table)	5
2.4 Installation Order	5
Worksheets	
3 GCCS Operating System Installation	7
4 GCCS Operating System Installation Configuration.....	13
5 Application Segment Installation	17
5.1 Segment Installer Use	17
5.2 Pre-Segment Installation	19
5.3 Segment Installation.....	21
6 Workstation Configuration	27
6.1 Populate the NIS Database from the NIS + Database (NIS Server Only)	27
6.2 TDBM Server Configuration	28
6.3 TDBM Client Configuration.....	31
6.4 Printer Setup and Configuration (Client Machine).....	32

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Notes

Chapter 1 Introduction

This manual provides instructions for installing the Global Command and Control System (GCCS) for the Hewlett Packard (HP) 9000 series workstations. These instructions include procedures for installing the HP Operating System and currently available software segments. They must be followed in the exact order as presented here. These guidelines are divided into the following chapters:

Pre-Installation Procedures

Presents procedures that must be performed before installing the GCCS Operating System. (Chapter 2)

GCCS Operating System Installation

Provides step-by-step instructions for installing the GCCS Operating System. (Chapter 3)

GCCS Operating System Installation Configuration

Provides instructions for configuring the GCCS Operating System installation. (Chapter 4)

Application Segment Installation

Explains which segments to install and their specific installation order. (Chapter 5)

Workstation Configuration

Explains how to complete TDBM Server and Client setup as well as user setup. (Chapter 6)

The GCCS concept is designed to support a wide range of mission applications through a diverse set of application “segments” executed under a Common Operating Environment. All segments that pass Defense Information Systems Agency (DISA) integration testing become part of the GCCS baseline. Testing of the segments and validation of the functionality is the responsibility of the Government executive agent that provides the segment.

While the HP version of GCCS can be installed independently from the Solaris version of GCCS, dependencies can be established between the HP and Solaris workstations in the system. The current Solaris installation establishes an Executive Manager server (EM Server) workstation and a Database Server (DB Server) workstation. The HP workstation should use the Solaris EM Server and DB Server as its EM and DB servers.

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Chapter 2 Pre-Installation Procedures

The HP GCCS software release consists of one GCCS Operating System tape, one GCCS Application Software tape, and an optional Secret Data tape.

WARNING: Operating system and application software tapes from different releases are not necessarily compatible and should not be mixed. Check the tape labels for corresponding release numbers and dates if you are not sure.

2.1 Installation Impact Information

Installing the HP GCCS software package removes any previously installed software.

Review the following information *before* starting the installation procedure. The operating system installation takes about 45 minutes.

- ◆ **Power Off:** The installation procedures are geared to start from a powered-off system. For instructions on how to properly power off the workstation, refer to the *Unified Build System Administrator's Guide*.
- ◆ **Hardware Requirements:** To install the GCCS Operating System, both the tape drive and the HP keyboard must be connected to the workstation. (This limitation is based on HP-UX driver requirements for bootable operating system tapes.) If the tape drive and the keyboard are already connected, proceed with the installation. If you need to connect the tape drive and keyboard on the workstation you are loading, refer to the applicable hardware manuals.

2.2 Security_Server File Configuration

For any site to have a single Solaris EM Server, some configuration changes need to be made before any HP workstations will function properly.

Once the HP workstation that is to act as the HP NIS Server has been determined, a data file on the Solaris side needs to be configured in order for the EM Server to recognize the designated NIS Server as a valid workstation. The HP workstation designated as the NIS Server will then be updated each time any user account manipulation occurs on the EM Server.

To accomplish this update, the `/h/EM/admin/security-scripts/Security_Servers` file needs to be edited on the EM Server to include the HP workstation. The `Security_Servers` data file should be modified to appear as below (the HP NIS Server hostname is `hp1` in this example, and the EM Server is `sun2`):

```
#Security Servers
#
#This file contains information about the host machines
#on the network which provide msq1, database and password
#name services.
#
#Each host providing services of that type should be listed
#here for use by Security_Manager, an application for adding,
#changing and deleting user accounts and groups.
#
#Each host listed should be of the form:
#
#host:db_name:msq1:rsh_command:file_path
#
#host          Host name of the machine.
#db_name       Sybase database name.  A server without a
#              sybase database should have NONE here.
#msq1          This field should contain TRUE or FALSE.
#              True means that this host acts as an msq1
#              server for logins and profile information.
#rsh_command   The full path of the remote shell command for
#              the host.
#file_path     Full pathname for the location of the served files.
#
#Lines beginning with a # are ignored, as are blank lines.

sun2:gccs:TRUE:/usr/bin/rsh:/etc/nis

#a sample HP entry should look like this
hp1:NONE:FALSE:/usr/ucb/remsh:/h/EM/nis_files/
```

In addition, HP EM clients' host names must be entered into the following file on the EM Server machine:

`/h/USERS/secman/Scripts/.rhosts`

If this is not the first installation of this workstation, the time stamp file will need to be removed prior to installing the Executive Manager Segment. Execute the following command on the EM Server:

`rm /h/data/global/EMDATA/msq1/timestamp/hostname`

2.3 Additional File Configuration (`active_spt` and `processor_table`)

To complete the configuration file update, the `/h/EM/data/global/config/active_spt` file and the `/h/EM/data/global/config/processor_table` file both need to be edited on the client machine to include the name of your EM Server. These files are modified in the same general manner as the `Security_Servers` data file. The two files should be modified as follows:

- a. The last line of the `/h/EM/data/global/config/active_spt` file should be modified to appear as below (an example of the line Before the modification and After the modification is presented for clarity):

Before:

```
u6sysexc#bems#System Executive#/h/EM/progs/uccs_system_executive
```

After:

```
u6sysexc#<your_emserver_hostname>#System Executive#/h/EM/progs/uccs_system_executive
```

- b. The last line of the `/h/EM/data/global/config/processor_table` file should be modified to appear as below (an example of the line Before the modification and After the modification is presented for clarity):

Before:

```
bems      GCCS Executive Manager
```

After:

```
<your_emserver_hostname>      GCCS Executive Manager
```

2.4 Installation Order

To load GCCS on an HP workstation, follow the steps listed below *in their exact order*:

1. Fill out the Installation Requirements Worksheet provided in this manual.

Following this chapter are several blank copies of the HP Installation Requirements Worksheet. Additional copies may be reproduced as required.

2. Install the GCCS Operating System (OS). (Chapter 3)
3. Configure the GCCS OS installation. (Chapter 4)
4. Install the application segments. (Chapter 5)
5. Configure each workstation. (Chapter 6)

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HP Installation Requirements Worksheet

Before beginning an installation of GCCS HP software, complete this form. The information recorded here is used during the load process.

NOTE: *Do not begin an installation without completing this information. Your System Administrator will provide you with the information required to complete this form.*

IP Address Information

Host RAM Value: _____

Hostname: _____

Host IP Address: _____

Subnetwork Netmask: _____

Default Router IP Address: _____

Will DNS be used at the site? ☐ YES ☐ NO

DNS Domain Name: _____

Primary DNS Server Hostname: _____

Primary DNS Server IP Address: _____

Is this platform the Executive Manager Server? ☐ YES ☐ NO

EM Server IP Address: _____

Is this platform the mailhost? ☐ YES ☐ NO

TDBM Hostname: _____

Is this platform the NIS Server? ☐ YES ☐ NO

NIS Domain Name: _____

Home Page Web Server Hostname: _____

Other Systems:

Hostname: _____

IP Address: _____

Hostname: _____

IP Address: _____

Hostname: _____

IP Address: _____

Hostname: _____

IP Address: _____

UB RequirementsIs this system the TDBM server? ☐ YES ☐ NO

System WAN UID: ____ ____ ____

Printers

Printer Type: _____

Device: _____

Printer Type: _____

Device: _____

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HP Installation Requirements Worksheet

Before beginning an installation of GCCS HP software, complete this form. The information recorded here is used during the load process:

NOTE: *Do not begin an installation without completing this information.* Your System Administrator will provide you with the information required to complete this form.

IP Address Information

Host RAM Value: _____

Hostname: _____

Host IP Address: _____

Subnetwork Netmask: _____

Default Router IP Address: _____

Will DNS be used at the site? ☐ YES ☐ NO

DNS Domain Name: _____

Primary DNS Server Hostname: _____

Primary DNS Server IP Address: _____

Is this platform the Executive Manager Server? ☐ YES ☐ NO

EM Server IP Address: _____

Is this platform the mailhost? ☐ YES ☐ NO

TDBM Hostname: _____

Is this platform the NIS Server? ☐ YES ☐ NO

NIS Domain Name: _____

Home Page Web Server Hostname: _____

Other Systems:

Hostname: _____

IP Address: _____

Hostname: _____

IP Address: _____

Hostname: _____

IP Address: _____

Hostname: _____

IP Address: _____

UB RequirementsIs this system the TDBM server? ☐ YES ☐ NO

System WAN UID: ____ ____ ____

Printers

Printer Type: _____

Device: _____

Printer Type: _____

Device: _____

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HP Installation Requirements Worksheet

Before beginning an installation of GCCS HP software, complete this form. The information recorded here is used during the load process:

NOTE: *Do not begin an installation without completing this information. Your System Administrator will provide you with the information required to complete this form.*

IP Address Information

Host RAM Value: _____

Hostname: _____

Host IP Address: _____

Subnetwork Netmask: _____

Default Router IP Address: _____

Will DNS be used at the site? ☐ YES ☐ NO

DNS Domain Name: _____

Primary DNS Server Hostname: _____

Primary DNS Server IP Address: _____

Is this platform the Executive Manager Server? ☐ YES ☐ NO

EM Server IP Address: _____

Is this platform the mailhost? ☐ YES ☐ NO

TDBM Hostname: _____

Is this platform the NIS Server? ☐ YES ☐ NO

NIS Domain Name: _____

Home Page Web Server Hostname: _____

Other Systems:

Hostname: _____

IP Address: _____

Hostname: _____

IP Address: _____

Hostname: _____

IP Address: _____

Hostname: _____

IP Address: _____

UB RequirementsIs this system the TDBM server? ☐ YES ☐ NO

System WAN UID: ____ ____ ____

Printers

Printer Type: _____

Device: _____

Printer Type: _____

Device: _____

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HP Installation Requirements Worksheet

Before beginning an installation of GCCS HP software, complete this form. The information recorded here is used during the load process:

NOTE: *Do not begin an installation without completing this information. Your System Administrator will provide you with the information required to complete this form.*

IP Address Information

Host RAM Value: _____

Hostname: _____

Host IP Address: _____

Subnetwork Netmask: _____

Default Router IP Address: _____

Will DNS be used at the site? ☐ YES ☐ NO

DNS Domain Name: _____

Primary DNS Server Hostname: _____

Primary DNS Server IP Address: _____

Is this platform the Executive Manager Server? ☐ YES ☐ NO

EM Server IP Address: _____

Is this platform the mailhost? ☐ YES ☐ NO

TDBM Hostname: _____

Is this platform the NIS Server? ☐ YES ☐ NO

NIS Domain Name: _____

Home Page Web Server Hostname: _____

Other Systems:

Hostname: _____

IP Address: _____

Hostname: _____

IP Address: _____

Hostname: _____

IP Address: _____

Hostname: _____

IP Address: _____

UB RequirementsIs this system the TDBM server? ☐ YES ☐ NO

System WAN UID: ____ ____ ____

Printers

Printer Type: _____

Device: _____

Printer Type: _____

Device: _____

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Chapter 3 GCCS Operating System Installation

This section describes how to install the GCCS HP-UX Operating System on an HP workstation.

NOTE: All steps *must* be performed in the *exact* order presented for the GCCS Operating System to be installed correctly. *Nothing may be skipped.*

This procedure takes about 45 minutes. See the *Unified Build System Administrator's Guide* for conventions used in these instructions.

To install the OS:

1. Ensure the HP workstation is turned off.

WARNING: Read Step 2 through Step 4 carefully before continuing with this procedure. Because the length of time between Step 3 and Step 4 is minimal, hold the [Esc] key immediately when instructed. If you delay, the system boots from the first device it finds, which may not be the desired device.

2. Turn on the workstation.
3. On some HP workstations, the monitor flashes red, green, and blue upon start-up. If the workstation you are loading does this, press and hold down the [Esc] key until the menu below appears.

Certain power-saver monitors do not flash colors on start-up. On these machines, *as soon as text appears*, press and hold down the [Esc] key until the menu below appears.

Once the menu appears, release the [Esc] key.

While the specifics (i.e., the MB of memory) differ due to different machine configurations (i.e., an HP 712 vs. and HP 730), a menu similar to the one presented below appears.

```
PDC ROM rev. 1.2
IODC ROM rev. 1.0
192 MB of memory configured and tested.
Selecting a system to boot.
To stop selection process, press and hold the ESCAPE key.
Selection process stopped.
Searching for Potential Boot Devices.
To terminate search, press and hold the ESCAPE key.
Search terminated.
b)Boot from specified device
s)Search for bootable devices
a)Enter Boot Administration mode
x)Exit and continue boot sequence
?)Help
Select from menu:
```

Note: At this point, you should record your machine's RAM value on your HP Installation Requirements Worksheet. You *will* require this information later on in the install process.

4. Insert the GCCS Operating System tape into the tape drive. Wait for the lights on the tape drive to stop blinking.
5. At the Select from menu: prompt, enter **s** and press [Return] to search for your machine devices. (If you are loading an HP 712 or 770, your prompt may be a boot: prompt at which you should enter **search** and press [Return]). The following text appears:

```
Searching for Devices with Bootable Media
To terminate search, press and hold the ESCAPE key
```

Do *not* press [Esc]. Allow the machine to search for devices. The following text appears:

```
HP-UX INSTALLATION UTILITY -- MAIN MENU
Device Selection      Device Path      Device Type and
                        Utilities
P0                    scsi.6.0        HP C3010
                        IPL
P1                    scsi.3.0        HP HP35480A
                        IPL

Enter boot selection, (h)elp, or e(x)it:
```

The tape drive attached to your workstation should be listed as `scsi.3.0` in the Device Path column. If your tape type is not `scsi.3.0`, you need to change its device switches to `scsi.3.0`.

-
6. To reboot from SCSI address 3.0, enter `scsi . 3 . 0` and press [Return]. (On an HP 712 or 770, enter `boot scsi.3.0` and press [Return].)

The screen displays several messages to show the installation processes' progress. When the EISA configuration is complete, the following text appears:

```
EISA configuration has completed.  Following the completion of a
successful HP-UX installation, please check the "etc/eisa/config.err"
file for any EISA configuration messages.
```

```
Press any key to continue>
```

7. Press [Return].

The following text appears:

```
Welcome to HP-UX install.  There are basically 4 steps to install-
ing HP-UX, which this and another utility will lead you through.
Step 1) Select the root "destination disk" and its characteristics.
Step 2) Optionally modify the file system parameters pre-set
for your chosen destination disk.
Step 3) Optionally choose any other disks to be added to the system.
This may be useful if root disk space is insufficient.
Step 4) Choose the filesets (functional groups of files) which
you want loaded onto the destination disk.
A menu driven interface will guide you through the above steps.
Press any key to continue>
```

8. Press [Return].

The system displays the HP-UX INSTALLATION UTILITY -- ROOT DESTINATION MENU (as shown below). Read the information carefully. The disk with *Bus Address 6* should be the default disk; it is *always* the preferred disk.

```
HP-UX INSTALLATION UTILITY -- ROOT DESTINATION MENU

Select one of the following disks (name and system location) connected
to your system to be the ROOT destination device for this installation.
Enter the item number, or highlight the item using the arrow keys and
press [Return].

If the desired ROOT disk is not listed, make sure it is connected
properly and turned on, then select the "Search Again" item.
If your disk is STILL not recognized, you can use the "Other disk" item
to manually enter the Disk address.

      Disk                Slot      Bus      Func
      -----            -
      Number            Addr      Num
-----
1.  HP C3010             at          0  6      1
2.  HP C3010             at          0  5      1
3.  Search Again
4.  Other disk
5.  Exit Install

Enter selection [1]
```

9. Accept the default disk by pressing [Return].

The installation program checks the selected disk. The following text appears:

```
Note: There may be an HP-UX system already on this disk.
<Press any key to continue.>
```

10. Press [Return]. The following text appears:

```
Do you want the root filesystem to allow long filenames? [y]
```

11. Press [Return].

The HP-UX INSTALLATION UTILITY -- MAIN MENU (shown below) appears:

```

HP-UX INSTALLATION UTILITY -- MAIN MENU

          Major      Slot      Bus      Function      Mount
          Number      Address      Number      Model      Point
-----
Source:          -1      0          3          1          Tape
Root Device:      7      0          6          1      HP C3010      /

If the destination device shown above is correct, and you
do not want to modify filesystem parameters or add any additional
non-root filesystems, select the CONTINUE option below.

1.  Continue Installation Process.
2.  Change ROOT Destination Device.
3.  Change ROOT Filesystem Type.
4.  Change ROOT Filesystem Parameters.
5.  Add a non-root Disk/Filesystem.
6.  Modify/Display non-root Disks/Filesystems.
7.  EXIT the Installation.

Enter selection [1]

```

12. To continue the installation process, accept the default by pressing [Return].

The Swap Space Verification screen appears, as well as a prompt for the root disk swap space.

```

SWAP SPACE VERIFICATION

Verify that the root disk swap space is sufficient and change if
necessary.
Root Disk Swap Space (in 1024 byte blocks): [183766]

CTRL-X=Done,      CTRL-U=Undo changes,      ?=Help on current item

```

13. Enter a swap space value which equals approximately twice your machine's RAM and press [Return]. Your machine's RAM value should be available on your HP Installation Requirements Worksheet. If you do not know your machine's RAM, contact your System Administrator.

Note: Swap space value will be rounded to match system constraints.
(Press any key to continue.)

14. Press [Return]. The following text appears:

	Major Number	Slot Number	Bus Address	Function Number	Model	Mount Point
Root Device:	7	0	6	1	HP C3010	/
Continuing the installation will destroy the contents of the disk listed above.						
Do you wish to continue? (y/n) []						

15. Enter **y** to continue.

The system begins to unpack the tar files that comprise the operating system. A series of messages appears on the screen, giving a progression of the process. This unpacking process continues for about five minutes. At the end of the process the messages stop and the tar files are completely unpacked from the tape. The system then reboots and begins the GCCS operating system installation.

If you are loading an HP 712 or 770 machine, the machine will identify the PS2 keyboard port during the reboot process and may prompt you for the proper keyboard interface file. The prompt lists different interface files which are scrollable using the [Space] bar. The appropriate response to this question should usually be the following:

PS2_DIN_US_English.

Accept this interface file by pressing return and the boot process continues.

16. Wait for the GCCS operating system installation to complete (about 40 minutes).

17. When the operating system is installed, the system proceeds to the first prompt to configure the installation (Chapter 4).

Chapter 4 GCCS Operating System Installation Configuration

This section describes how to configure the GCCS operating system installation. Refer to your completed HP Installation Requirements Worksheet for the correct responses to the prompts that appear in the steps below. Use the arrow and tab keys to select responses. Sample entries are listed in parentheses in the step following each prompt.

Answer the following questions as indicated.

NOTE: At the various verification steps in this configuration script, if you detect an error in your response to a question, entering **n** will take you through a “loop” which will allow you to correct the error before proceeding to the next step.

Enter the system name, then press [Return]

1. Enter the system name (8-character maximum) (example: sherlock) and press [Return].

You have entered <hostname> as the system name. Is this correct?

2. Verify the hostname as the system name you previously entered, enter **y**, and press [Return].

Enter your internet protocol address, then press [Return].

3. Enter the IP address (example: 129.221.146.12) and press [Return].

You have chosen <IP address> as the IP address for this system. Is this correct?

4. Verify the IP address, enter **y**, and press [Return].

Does this workstation's network have subnetworks?

5. Enter **y** and press [Return].

Enter the subnetwork mask, then press [Return].

6. Enter the subnetwork mask (example: 255.255.255.0) and press [Return].

You have chosen <subnetwork mask> for the system. Is this correct?

7. Verify the subnetwork mask, enter **y**, and press [Return].

Enter the network (IP) address of the default router, then press [Return].

-
8. Enter the IP address of the default router (example: 121.0.0.254) and press [Return].

You have specified the following default network router: Router Address
<router address>. Is this correct?

9. Verify the router address, enter **y**, and press [Return].

Is DNS being used at this site?

10. Enter **y** and press [Return].

Enter the DNS domain name, then press [Return].

11. Enter the DNS domain name (example: hqbosnia.disa.smil.mill) and press [Return].

Enter the DNS server hostname, then press [Return].

12. Enter the DNS server hostname (example: watson) and press [Return].

Enter the network (IP) address of <DNS server hostname>, then press
[Return].

13. Enter the IP address of the DNS server (example: 121.147.165.40) and press [Return].

You have specified the following DNS server information:

DNS Domain:
DNS Server:
DNS Server Address:

Is this correct?

14. Verify the DNS server information, enter **y**, and press [Return].

Is this the Executive Manager server?

15. Enter **n** and press [Return].

Enter the IP address of your EM server.

16. Enter the IP address of the EM server (example: 121.0.0.5) and press [Return].

You entered <IP address>. Is this correct?

17. Verify the IP address, enter **y**, and press [Return].

Is this platform the mailhost?

18. Enter **n** and press [Return].

The following procedure enables you to set the timezone...
Enter the number for your location (1-7), then press [Return].

19. Enter the number which corresponds to the desired geographic region (example: 1.Europe) and press [Return].

Enter your time zone.

20. Enter your time zone (example: GMT) and press [Return].

The timezone entered is <Eastern Standard/Daylight>. Is this correct?

21. Verify the time zone, enter **y**, and press [Return].

The current system time is <XX>.
Is this correct?

22. Enter **n** and press [Return].

"You will be prompted for the date and time..." if the current time is XX.

23. Enter values for the current month, day, year, hour, and minute when prompted. Press [Return].

At this point, the screen clears and remains black while the system processes the configuration information. When it is done, the following text appears:

Installation complete.
Rebooting system to make changes effective...

24. The machine reboots, and after a few minutes, you see the following:

Possible configuration(s):

(1) One keyboard with a single monitor
(2) One keyboard with dual monitors

Select the number that corresponds to your configuration:

25. Enter **1** and press [Return].

Option 1 was selected.
Is this correct (y/n)?

26. Enter **y** and press [Return].

The operating system installation configuration process is now complete. At this point, the workstation is ready to be loaded with the GCCS application segments (Chapter 5).

Chapter 5 Application Segment Installation

After the GCCS Operating System has been loaded and properly configured, you may begin loading the segments required to build the GCCS system. Before loading any segments, however, you must ensure the system hosts files and other important files are configured correctly.

5.1 Segment Installer Use

The instructions contained in this section are intended for general, quick reference use only. For more information regarding segment installation and the SEGMENT INSTALLER window, refer to the *Unified Build System Administrator's Guide*.

1. Login as **sysadmin** and select Segment Installer from the SOFTWARE menu.



Figure 1. SEGMENT INSTALLER Window

2. In the **SEGMENT INSTALLER** window, click **SELECT MEDIA** in the **SOURCE** box. The **SELECT MEDIA** window appears.



Figure 2. **SELECT MEDIA** Window

3. If loading from tape, complete the following steps. If loading from the Installation Server, proceed to Step 4.
 - a. In the **SELECT MEDIA** window, click the diamond knob next to the **LOCAL** field (if the tape is in a drive which is attached to the machine you are upgrading) or the diamond knob next to the **REMOTE** field (if the tape is in a drive which is attached to another machine).
 - b. If you select **REMOTE**, a **NAME** field appears just below the **REMOTE** field. Click the button next to the **NAME** field to display a list of hosts available on the local network, and select the hostname of the machine where the tape drive is located.
 - c. In the **DEVICE** box, select the media type (e.g., **DAT** or **OTHER**) for the tape. If you select **OTHER**, you must enter the device name of the tape medium you are using (e.g., `/dev/rmt/0mn`).

Note: It is highly recommended that you use a no-rewind tape device when specifying the device name in the **OTHER** field.

Proceed to Step 5.

4. If loading from the Installation Server, in the **SELECT MEDIA** window, click **NETWORK** in the **DEVICE** box.
5. Click **OK** to return to the **SEGMENT INSTALLER** window.

6. Click **Read TOC**. The items that appear in the **TABLE OF CONTENTS** portion of the **SEGMENT INSTALLER** window are the names of software segments contained on the tape or Installation Server.
7. From the **TABLE OF CONTENTS** list, select the segment you wish to load.
8. Click **INSTALL**. A window appears, displaying an hourglass, indicating that the system is installing the selected segment. The segment requires a few minutes to load and execute.
9. When the segment installation is complete, a warning window appears, stating **Selected Segment(s) Installed Successfully**. If post install information is required or other special actions need to be taken, a warning window or the specific segment install procedures inform you.
10. Once you have finished a segment install, in the **SEGMENT INSTALLER** window, click **EXIT**.

5.2 Pre-Segment Installation

Before you can install segments on the system, you must first ensure that the local hosts table had been appropriately updated. Accomplish this update as follows:

1. Update the local hosts file to reflect the names and aliases of local machines, including the EM Server, the DB Server, and the loopback address for the local host, localhost, and emhost aliases. For more details on editing the Local Hosts, see the *Unified Build System Administrator's Guide*.
1. Update the hosts table as follows:
 - a. Login as **sysadmin**.
 - b. From the **Network** menu, choose **Edit Local Hosts**. The **EDIT HOSTS** window appears.
 - c. Delete any unnecessary hosts (i.e., JOTS, TIMS, MILAN) from the list in the **EDIT HOSTS** window by selecting the entry and clicking **DELETE**.
2. For the “emserver”, “dbserver” and “loopback address” machines, you must alias the machine’s actual name to the server designation as follows:

Note: You *must* edit the hosts in a manner indicated by this procedure (i.e., as a *two-step* procedure). If you do not save the new host name *before* attempting to alias the server designation, the system *will not* acknowledge the host name change and will continue to see the machine as the server designation, ignoring the new host name (i.e, you’ll have a host with the host name “emserver” (not the real host name) and it will be aliased to “emserver”).

- a. In the **EDIT HOSTS** window, select the “emserver” entry and click **EDIT**. The **EDIT MACHINE** window appears.
- b. In the **EDIT MACHINE** window, verify the correct IP address for the emserver is shown in the **MACHINE ADDRESS:** field. If the IP address is incorrect, enter the correct one into the **NEW MACHINE ADDRESS:** field.

-
-
- c. In the EDIT MACHINE window, enter the host name (example: `hornet`) for the emserver machine into the NEW MACHINE NAME: field.
 - d. In the EDIT MACHINE window, click OK to save the changes you've made. The EDIT HOSTS window appears.
 - e. Select the entry you just updated and click EDIT. The EDIT MACHINE window appears.
 - f. In the EDIT MACHINE window, click ALIASES. The ALIASES window appears.
 - g. In the ALIASES window, enter the server designation (example: `emserver`) as an alias for the host name (i.e., the host named `hornet` would have an alias for `emserver`) and press [Return] to accept the entry.

IMPORTANT: You must press the [Return] key on your keyboard to accept the entered alias. If you click Cancel in the ALIASES window, the alias information will not be saved.

- h. Click OK in the ALIASES window. The ALIASES window closes, returning you to the EDIT MACHINE window.
 - i. In the EDIT MACHINE window, click the Trusted Host toggle so that it is filled (on). This host (`hornet` aliased as `emserver`) is now designated as a trusted host for your machine and can freely access your machine at all times.
 - j. Click OK in the EDIT MACHINE window. The EDIT MACHINE window closes, returning you to the EDIT HOSTS window. In the * column of this window, you will now see one or more of the following indications, depending on the changes you have made:
 - ◆ A -- Indicating the machine description has been added during this session.
 - ◆ D -- Indicating the machine description has been marked for deletion during this session.
 - ◆ M -- Indicating that this machine description has been modified during this session.
 - ◆ T -- Indicating that this machine description has been designated a TRUSTED HOST during this session.
 - k. Repeat Step b through Step j for the “dbserver” entry and the “loopback” entry, ensuring that you change the server designation to the actual machine’s host name and then alias that host name to the server designation. Also, ensure that you alias the loopback address to `loghost`, `localhost` and `emhost`.
 - l. Add any additional required hosts to your local hosts table by clicking ADD in the EDIT HOSTS window. The ADD MACHINE window, similar to the EDIT MACHINE window, appears. Enter the machine’s IP address and host name into the appropriate fields and create any necessary aliases.
 - m. Click OK in the EDIT HOSTS window.
-
-

3. Select **CHANGE MACHINE ID** from the **Network** pull-down menu. Enter the machine name and its IP address into the appropriate boxes in the lower half of the window. Click **Exit**. A confirmation box appears indicating that the machine must be rebooted for the changes to take effect. Click **OK** to reboot.
4. Login as **sysadmin** (default password **vinson**) and select **DISK MANAGER** from the **Hardware** menu. If applicable, use the Disk Manager to mount any additional hard drives. For more information regarding the **Disk Manager** window, refer to the *Unified Build System Administrator's Guide*.

5.3 Segment Installation

Once the local hosts table has been updated, you may install the following segments:

WARNING: These applications *must* be loaded in this exact order. If application segments are loaded in the wrong order, the GCCS load will fail and the workstation will have to be reloaded, starting with the operating system.

- ◆ HP OS Patch
- ◆ GCCS COE
- ◆ EXEC MGR
- ◆ JMTK
- ◆ UBApps
- ◆ JMCISApps
- ◆ PRINTER
- ◆ Any additional HP-based GCCS Application Segments

Using the general procedures outlined in Section 5.1 of this document, install the following application segments listed:

1. If the tape has not been previously inserted into the tape drive, insert the HP OS Patch tape into the tape drive.
2. Select **SEGMENT INSTALLER** from the **Software** menu.
3. Install the HP OS Patch.
4. Eject the HP OS Patch tape.
5. Insert the GCCS Application tape into the tape drive.
6. Select **SEGMENT INSTALLER** from the **Software** menu.
7. Install the GCCS COE.

When the GCCS COE segment install is complete, a warning window appears, stating that you must configure the Host/Server settings and reboot the system when the installation is complete. Click okay to dismiss the warning window.

8. Click **OK** in the warning window to dismiss it.
9. Configure the TDBM Host and Client(s) settings as follows. For more details on the **SysCon** window, see the *Unified Build System Administrator's Guide*:
 - a. From the **Network** menu, select **System Configuration**. The **SysCon** window appears.
 - b. To set the hosts, in the **Hosts** box (on the left side of the window), click the toggle box beside the host entry you wish to change (starting with **Full Host #2**).
 - c. Click the **Full Host #2** field next to the appropriate toggle box. The field becomes active and is now editable. Enter the name of the host.

Note: When entering hostnames, you should enter the name of the local host ("*this*" machine's hostname) in the **Full Host #2** field and any other hosts on the local network (other machines on your local LAN) into the subsequent **Full Host** fields. Also, you do not need to enter the TDBM host name in any of the fields on the left of the window. The TDBM host name is already filled-in as **Full Host #1**.

- d. Verify the hostname in the **Local Hostname:** field. This should be your workstation's hostname.
- e. In the **TDBM Master:** field, enter the TDBM Server hostname for your workstation.
- f. In the GCCS environment, both the TDBM server and TDBM clients should have the TDBM server hostname in each of the following:

admin	qs
prt	wdbm

NOTE: Typically, in the GCCS environment, both the TDBM server and TDBM clients should have the TDBM server hostname in each of the above fields in the **SysCon** window. However, to account for diverse configuration capabilities, any hostname may be entered in these fields.

- g. Click **OK** to save the changes you have made.
10. When the install is complete, use the **System Reboot** option under the **Hardware** menu to reboot the system.

WARNING: You *must* reboot the workstation after the GCCS COE segment is installed. *Do not load any additional segments without rebooting the workstation.*

NOTE: Ensure that the EM Server is operational before configuring the EXEC MGR application on the HP workstation(s).

11. Insert the tape containing the EXEC MGR segment and install it.

12. Once the EM install has completed, you will receive a PostInstall window that will prompt you for site specific information. You will receive several prompts. Respond to them as follows:

```
The workstation may be configured as one of the following:
1.Executive Manager Standalone
2.Executive Manager Server
3.Executive Manager Client
Enter your choice (1,2,3):
```

- a. Enter **3** and press [Return] to select the Executive Manager Client option.

```
You selected Executive Manager Client. Is this correct?
Press [y] for yes or [n] for no, then press [Return]
```

- b. Enter **y** and press [Return] to confirm your selection.

```
Is this machine going to be the master NIS server (y/n)?
```

- c. Enter **y** and press [Return] to confirm that this machine is the master NIS server.

```
You selected this machine to be the NIS server. Is this correct?
Press [y] for yes or [n] for no, then press [Return].
```

- d. Enter **y** and press [Return] to confirm that you want this machine to be the master NIS server.

NOTE: The NIS domain name must be different than the NIS+ domain name. (example NIS domain name: hpnis.eucom; example NIS+ domain name: nis.eucom)

If a NIS domain name has already been set on the system, the following text appears after the confirmation in Step d. If a NIS domain name has not already been set on the system, proceed to Step h.

```
The current NIS domain name is: _____.
Do you wish to enter a new NIS domain name? (y/n)
```

- e. If you wish to change the domain name, select **y** and press [Return].

```
Enter new NIS domain name.
```

- f. Enter the new domain name and press [Return].

If a NIS domain name has not already been set on the system, the following text appears after the confirmation in Step d:

```
There is no NIS domain name. Specify one now.
Enter the NIS domain name: _____.
```

- g. Enter the new domain name and press [Return].

Continue the EXEC MGR installation configuration procedure as follows:

```
You selected the NIS domain name of _____. Is this correct?  
Press [y] for yes or [n] for no, then press [Return]
```

- h. Enter **y** and press [Return] to confirm your selection.

```
Use _____ when asked for a server.
```

Continue the EXEC MGR installation configuration procedure as follows:

```
You will be required to answer a few questions to install the Network  
Information Service.
```

```
Do you want this procedure to quit on non-fatal errors? [y/n: n]
```

- i. Enter **n** and press [Return].

```
OK, but please remember to correct anything which fails.  
If you don't, some part of the system (perhaps the NIS itself) won't  
work.  
At this point, you must construct a list of the hosts which will be  
NIS servers for the "<local network domain>" domain.  
This machine, '<local machine name>', is in the list of Network  
Information Service servers.  
Please provide the hostnames of the slave servers, one per line.  
When you have no more names to add, enter a <ctrl-D> or a blank line.  
  
next host to add: <NIS server name>  
next host to add:
```

- j. Enter the hostname and press [Return]. To exit the add mode, press [RETURN] again, without entering any data at the prompt.

```
The current list of NIS servers looks like this:
```

```
<NIS server name>
```

```
Is this correct? [y/n: y]
```

- k. Enter **y** and press [Return] to confirm your selection. Various messages appear. When the EXEC MGR configuration is complete, the command prompt appears.
- l. Type reboot and press [Return].

WARNING: You *must* reboot the workstation after the Executive Manager segment is installed. Do not load the GCCS COE segments without rebooting the workstation.

-
- m. Login as `sysadmin` when the command prompt reappears.
 - n. Open an xterm window. In the xterm, enter `cd /h/EM/systools` to change to the `systools` directory. Enter `yp_make` and press [Return] to execute the `yp_make` program. The program calls for no operator inputs. When the program is complete and the prompt has returned, close the xterm window.

13. Using the **SEGMENT INSTALLER**, install the following segments:

- ◆ EM Process Patch
- ◆ EM Printer Admin
- ◆ EM Printer Patch

14. Using the **SEGMENT INSTALLER**, install each of the following segments:

Note: To avoid dependency errors, the segments listed should be installed in the exact order presented below.

- ◆ JMTK
- ◆ UBApps
- ◆ JMCISApps
- ◆ PRINTER

15. When each segment installation is complete, a warning window appears stating **Selected Segment(s) Installed Successfully**.

16. Click the **EXIT** button to dismiss the warning window after each segment has been installed.

17. Retrieve a copy of the `resolv.conf` file from the EM Server as follows:

- a. In an xterm window, change directories by entering `cd /etc` at the command prompt.
- b. Ftp to the EM Server by entering `ftp <emserver hostname>` at the command prompt.
- c. Change directories on the Em Server by entering `cd /etc` at the `ftp>` prompt.
- d. Enter `get resolv.conf` at the `ftp>` prompt to retrieve the file.

18. Ensure the `/h/EM/admin/security-scripts/Security_Servers` file is configured in accordance with the instructions in Section 2.2 of this document.

19. Ensure the `/h/EM/data/global/config/active_spt` file and the `/h/EM/data/global/config/processor_table` file are configured in accordance with the instructions in Section 2.3 of this document.

20. Before loading any additional GCCS segments, you should ensure that the workstation had been configured in accordance with the instructions in Chapter 6.

21. Load any additional HP-based GCCS application segments at this time, using the **Segment Installer** window.

Note: If you wish to do any Elint processing, you must ensure that the machine whose disk serves the /h/data/global/UB directory is loaded with the GCCSSD, Version 2.2.1 segment available on the optional Secret Data tape. Typically, the machine whose disk serves the directory is the EM Server.

22. On the **Segment Installer** window, click **EXIT** to dismiss the window.
23. Using the **Logout** option under the **Hardware** menu, log out of the system.

Chapter 6 Workstation Configuration

Once the application segment software load is complete, each workstation must be configured to establish important network functions.

6.1 Populate the NIS Database from the NIS + Database (NIS Server Only)

On the HP NIS Server, the NIS database must be populated before the workstation configuration is complete. Populate the NIS database as follows:

1. Login as **sysadmin** on the NIS + server (normally the EM Server).

2. Launch an xterm window.

3. Enter the following command to create a file called `passwd`:

```
niscat passwd.org_dir >/tmp/passwd
```

4. Edit the newly created `passwd` file as follows:

- a. Enter **vi** `/tmp/passwd` and press [Return].

- b. Enter `/` (slash).

- c. Enter **csh** to move to the first instance of csh.

- d. Enter **c\$** to edit the remainder of the line.

- e. Enter **csh** and press [ESC] to change the rest of the line to csh.

- f. Enter **n** to move to the next instance of csh.

- g. Enter `.` (period) to repeat the last command.

- h. Repeat Step f and Step g until all of the extra text after `/bin/csh` for each user is deleted.

- i. Enter **:wq!** when the end of the file is reached.

5. Enter the following command to create a file called `group`:

```
niscat group.org_dir >/tmp/group
```

6. Transfer the files via FTP from the EM Server to the NIS Server as follows:

- a. Enter **ftp** `<HP_NIS_Server_Name>` where `<HP_NIS_Server_Name>` is the name of the HP NIS Server.

- b. Enter **bin**.

- c. Enter `put /tmp/passwd /h/EM/nis_files/passwd`.
 - d. Enter `put /tmp/group /h/EM/nis_files/group`.
 - e. Enter `quit`.
7. Log out of the EM Server.
 8. Log into the HP NIS Server as **sysadmin**.
 9. Launch an xterm window.
 10. Ensure the EM Scripts are currently running as follows:
 - a. Enter `vi /etc/passwd` at the command prompt.
 - b. Enter `/` (slash).
 - c. Enter `+` (plus sign) to move to the first instance of `+` (plus). There should be at least one instance of the `+` alone on a line in the `passwd` file. This indicates that the EM Scripts are up and running.
 - d. Enter `:q!` to quit the file.
 - e. Repeat Step a through Step d for the `/etc/group` file.
 11. Enter the following command:

`/usr/etc/yp/ypmake DIR=/h/EM/nis_files passwd`
 12. Enter the following command:

`/usr/etc/yp/ypmake DIR=/h/EM/nis_files group`
 13. Log out of the HP NIS Server.

6.2 TDBM Server Configuration

The TDBM Server machine must be configured to establish a WAN UID, add and initialize UB printers, configure DDN hosts, establish new `sysadmin` and `secman` passwords, set default UB graphic and text printers, establish communications channels, broadcasts and auto-forward tables, and set UID correlation. To configure the TDBM Server:

1. On the TDBM Server, log in as **sysadmin** (default password is **vinson**).
-

-
2. From the **Network** menu, select **Set WAN UID**. The **Set Wan UID** window appears.

IMPORTANT: Do not configure a UID prefix which is inappropriate for your site. The three-letter UID “trigraph” must be centrally managed and assigned, likely from the OSF. The UID prefix must be properly managed to prevent duplication of a UID employed at another site. Duplicate UID prefixes catastrophically affect track correlation. For information on setting a UID prefix, see the *Unified Build System Administrator’s Guide*.

3. Enter the WAN UID of the system. For detailed instructions, refer to the *Unified Build System Administrator’s Guide*.
4. From the **Hardware** menu, select **Config Printer**. The **PRINTER SETUP** window appears.
5. Add and initialize printers. For detailed instructions, refer to *Unified Build System Administrator’s Guide*.
6. From the **Network** menu, select **Config DDN Host Table**. The **Net Hostname Table - Primary** window appears.
7. Configure the DDN Host Table. For detailed instructions, refer to *Unified Build System Administrator’s Guide*.

Note: Only TDBM Masters need to be entered into the DDN Host Table. All TDBM Masters with which your site communicates should be entered into the DDN Host Table.

8. From the **LAUNCH** window, select the xterm icon. An xterm appears.

Note: On HP machines, both the `sysadmin` and `secman` passwords must be changed locally on every machine.

9. At the command prompt in the xterm, login as `root` (`su -root`) and enter password when prompted.
10. At the command prompt, enter `passwd sysadmin`.
11. At the prompt, enter the default password for `sysadmin`.

Note: When changing the `sysadmin` password, it is important to use your local system administrator’s recommendation. *Do not* change the password without consulting your local system administrator.

12. At the prompt, enter the new password for `sysadmin`.
 13. At the prompt, to confirm the new password, re-enter the new password for `sysadmin`.
 14. At the command prompt, enter `passwd secman`.
-

-
15. At the prompt, enter the default password for `secman`.

Note: When changing the `secman` password, it is important to use your local system administrator's recommendation. *Do not* change the password without consulting your local system administrator.

16. At the prompt, enter the new password for `secman`.
17. At the prompt, re-enter the new password for `secman`.
18. Log out of GCCS, using the Logout option on the System menu.
19. Log in as a valid GCCS user.
20. From the MISC menu, select Printer Chooser. The PRINTER CHOOSER window appears.
21. Set the default Graphic and Text printers. For detailed instructions, refer to the *Unified Build User's Guide*.
22. From the COMMS menu, select Communications. The COMMUNICATIONS window appears.
23. Add and configure the appropriate UB communications channels. For detailed communications channel configuration instructions, refer to the *Unified Build User's Guide*.
24. From the COMMS menu, select Auto-Forward Table. The AUTO FORWARD TABLE window appears.
25. Add and configure the appropriate auto-forward tables. For detailed instructions, refer to the *Unified Build User's Guide*.
26. From the FOTC/BCST menu, select Broadcasts. The BROADCASTS window appears.
27. Add and configure the appropriate broadcasts. For detailed instructions, refer to the *Unified Build User's Guide*.
28. From the FOTC/BDCST menu, select FOTC PARAMETERS. The EDIT BGDBM CONFIGURATION window appears.

IMPORTANT: Do not configure a UID prefix which is inappropriate for your site. The three-letter UID "trigraph" must be centrally managed and assigned, likely from the OSF. The UID prefix must be properly managed to prevent duplication of a UID employed at another site. Duplicate UID prefixes catastrophically affect track correlation. For information on setting a UID prefix, see the *Unified Build System Administrator's Guide*.

29. Ensure all fields are clear of any information. In the BGDBM CONFIGURATION box, set the BGDBM MODE diamond knob to UID CORRELATION. For detailed instructions, refer to the *Unified Build User's Guide*.
30. Log out of GCCS, using the Exit option on the System menu.
-

6.3 TDBM Client Configuration

The TDBM Client machine must be configured to initialize printers, establish new `sysadmin` and `secman` passwords, and set default UB graphic and text printers. To configure the TDBM Client:

1. On the TDBM client, log in as **sysadmin** (default password is **vinson**).
2. From the Hardware menu, select Config Printer. The PRINTER SETUP window appears.
3. Add and initialize printers. For detailed instructions, refer to *Unified Build System Administrator's Guide*.
4. From the LAUNCH window, select the xterm icon. An xterm appears.

Note: On HP machines, both the `sysadmin` and `secman` passwords must be changed locally on every machine.

5. At the command prompt in the xterm, login as `root`.
6. At the command prompt, enter `passwd sysadmin`.
7. At the prompt, enter the default password for `sysadmin`.

Note: When changing the `sysadmin` password, is it important to use your local system administrator's recommendation. *Do not* change the password without consulting your local system administrator.

8. At the prompt, enter the new password for `sysadmin`.
9. At the prompt, to confirm the new password, re-enter the new password for `sysadmin`.
10. At the command prompt, enter `passwd secman`.
11. At the prompt, enter the default password for `secman`.

Note: When changing the `secman` password, is it important to use your local system administrator's recommendation. *Do not* change the password without consulting your local system administrator.

12. At the prompt, enter the new password for `secman`.
13. At the prompt, re-enter the new password for `secman`.
14. Log out of GCCS, using the Logout option on the System menu.
15. Log in as a valid GCCS user.
16. From the MISC menu, select Printer Chooser. The PRINTER CHOOSER window appears.

17. Set the default Graphic and Text printers. For detailed instructions, refer to the *Unified Build User's Guide*.
18. Log out of GCCS, using the Exit option on the System menu.

6.4 Printer Setup and Configuration (Client Machine)

To update the printers on the client machine and create an acceptable solution for the printer naming conventions, complete the following:

1. On the TDBM client, log in as **sysadmin** (default password is **vinson**).
2. From the LAUNCH window, select the EM Printer icon. An EM Printer interface window appears. Respond to the prompts as follows:
 - a. Enter **I**, to update the printers on the client machine.
 - b. Enter **G**, to check the status and ensure the printers were updated on the client machine.
 - c. Enter **Q**, to quit the user interface.
3. Configure the UB printers as follows (For detailed instructions, refer to *Unified Build System Administrator's Guide*):
 - a. Login as **sysadmin** on the client machine.
 - b. From the Hardware menu, select Config Printer. The PRINTER SETUP window appears.
 - c. In the PRINTER SETUP window, click ADD. The ADD NEW PRINTER window appears.
 - d. Enter the appropriate information for each printer in the PRINTER NAME, PRINTER TYPE, HOST MACHINE, DEVICE, and AUTHORIZED REMOTE ACCESS fields.

Note: It is very important that you enter the printer name as **UPPERCASE** letters, as the printer configuration does not currently support **Mixed Case** naming conventions. The printer names should be the same as the original printer names, just all uppercase letters instead of mixed case.

- e. Ensure that you have checked the **USE EXISTING LOCAL UNIX PRINTER** toggle.

Note: The **USE EXISTING LOCAL PRINTER** setting should be used if the printer being enabled already exists in UNIX. Checking this box will prevent UB from modifying the UNIX printer and will simply allow UB to print to it. If you do not check this setting before initializing the UB printer, any Ub printer which uses a duplicate of the existing UNIX printer name will delete the UNIX printer and re-initialize it as a UB printer.

- f. Click OK in the ADD NEW PRINTER window. The PRINTER SETUP window appears.

- g. From the **PRINTER SETUP** window, click and hold the right mouse button to activate the pop-up menu.
 - h. Select **INITIALIZE** from the pop-up menu to update the applicable UB printer tables and set the printer configuration.
4. Modify the boot procedure to create the correct printer aliases as follows:
 - a. In an xterm window, enter the following:

```
vi a_add_uppercase_alias
```

Enter the following text into the newly created file:

```
#!/bin/csh -f
#
#   Add an ALL CAPS printer for each printer that is in the
#   printer table.
#
Set table = "/h/data/global/EMDATA/config/printer_table"

foreach printer (`grep ";" $table | grep -v "#" | grep -v False | tr ' [= ]' '[_]= '`)
  set printrname = `echo $printer | cut -d";" -f1`
  set allcapsprinter = `echo $printrname | tr '[a-z]' '[A-Z]'`
  if ( $allcapsprinter != $printrname ) then
    set host_name = `echo $printer | cut -d";" -f2`
    echo Build a printer, named $allcapsprinter, that communicates with a printer,
named \
$printrname, that is actually on $host_name.
    /usr/lib/lpshut
    /usr/lib/lpadmin -P$allcapsprinter -v/dev/null -mrmodel -ocmrmodel \
      -osmrmodel -ob3 -orm$host_name -orp$printrname -v/dev/null
    /usr/lib/lpsched
    /usr/bin/enable $allcapsprinter
    /usr/lib/accept $allcapsprinter
  endif
end
```

- b. Enter **:wq!** to save the file.
- c. Copy the `a_add_uppercase_alias` file to the appropriate directory as follows:


```
mv a_add_uppercase_alias /h/EM_PRINTER/progs/a_add_uppercase_alias
```
- d. Endure that the `a_add_uppercase_alias` file has 750 set as permissions, ownership of root and is part of the group gccs.

- e. In the `/h/EM_PRINTER/progs` directory, edit the `s_update_printers_on_a_hp_client` file. At the very bottom of the file, between the `rm -f $input $lpstat_file $table_file` line and the `echo " "` line, enter the following line:

```
/h/EM_PRINTER/progs/a_add_uppercase_alias
```

- f. Ensure that the `s_update_printers_on_a_hp_client` file has permissions of 750 set, is owned by `root`, and is part of the group `gccs`.
- g. Reboot the system. When the system comes back up, there will be an all caps alias created for the first 5 non-deleted, non-all caps printer names. This would indicate that the printers you want to use for UB printing should be the first 5 printers.